

Frame-by-Frame Exposure Control Printer (PAR #13)

This project consists of developing a printer which is capable of changing light level delivered to the printing gate during the interval involved in the passage of the interframe spacing under the gate. This will provide different controlled levels of exposure for each individual frame. A paper tape reader will provide input signals necessary to adjust illumination for each frame of the roll. The printer will be of the Niagara type with the additional capabilities described above. Such a printer would be invaluable in field installations where frame-by-frame processing is not available or impractical.

(a) This is an approved Significant Project under contract 7713.

25X1A

(b) Estimated Factory Cost

(c) The mechanical design is nearly complete. The indexing shutter has been breadboarded and tested and the density control package is being assembled for trial. The control circuit design is complete and chassis construction is underway.

25X1A

(d) Anticipated expenditure in FY 63

Bidirectional Reprint Printer (PAR #17)

The Bidirectional Reprint Printer will be developed specifically for the reprint task. The design will attempt to maintain existing printer characteristics, such as resolution, speed, and contrast and in addition provide a convenient mechanism to allow the reprinting of short lengths within a given length of original material. Rapid, safe slewing of negative material without unthreading will be a design goal. In addition the problems of alignment and tracking will be studied with the aim of developing a unit capable of printing full rolls in either direction. While this is a project in which SPPL has indicated a special interest, the printer would also be generally useful particularly in smaller less skilled installations where the need for reprinting may be higher.

(a) This is an approved Significant Project under contract 7713.

25X1A

(b) Estimated Factory Cost

(c) Design is complete, and the basic printer (a Niagara) and the additional parts are in work.

25X1A

(d) Anticipated expenditure in FY 63

Experimental Continuous Slit Color Printer (PAR #18)

With the probable advent of color materials for strategic missions there will be a need for a continuous slit color printer for production of duplicates. We propose to develop such an experimental color printer with manual color filter controls to be used in establishing future color printer criteria as they apply to reconnaissance photography.

(a) This was submitted on a Significant Project under contract 7713.

25X1A

(b) Estimated Factory Cost

(c) The light source and filter pack, which are main developmental items are designed and fabrication has started.

25X1A

(d) Anticipated expenditure in FY 63

Conversion of the Grafton to Reversal (PAR #40)

It has long been felt that we should have an adequate inhouse capability for reversal processing. This opinion is further supported by substantial evidence that this may be one of the more satisfactory approaches to the problems of radiation fog and the preservation of maximum information through multiple generations.

Now that the Trentons have thoroughly proved themselves for the processing of original negative materials, the Grafton processor may be considered available for modification to a multiple station machine capable of handling a variety of materials requiring the use of up to ten different solutions simultaneously.

While the original concept of this conversion was to make a machine for standard reversal processing, it is now evident that by careful planning for the proper tank sequence the machine will also be adaptable to certain color processes. As laid out, the modified Grafton will be capable of handling the following:

1. Standard B & W reversal process for 8430, etc.
2. Special B & W reversal process for SO-105.
3. Color films requiring the ME-2B Process, such as Ektachrome.
4. Color films requiring the E-3 process, such  SO-271.

- 25X1A
- (a) This is a proposed Significant Project under Contract 7713.
  - (b) Estimated Factory Cost
  - (c) Only the planning and estimating has been done.
  - (d) No Expenditure in FY-63.

Conversion of the Speltron to a Color Processor (PAR #41)

In order to complete our capability to handle all four types of color materials we propose to convert the Speltron machine which is no longer required for the interrupted processing of mission material.

This unit will be set to handle the C-22 and P-122 processes used in negative-positive color system for Ektacolor or Kodacolor.

- (a) This is being submitted as a Significant Project under contract 7713.
- (b) Estimated Factory Co
- (c) Only the planning and estimating have been done.
- (d) No expenditure is expected in FY 63.

25X1A